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4.4 Information Ecology

We call for: A major commitment to analyze and explore the opportunities and implications of the rapidly evolving "information and communication ecosystem" and to identify critical information ecology issues relating to sustainability. We call for the design and establishment of, and support for participatory enabling environments - from community and interlocal networks to national and global frameworks - within which information and communications technologies, systems and processes - including traditional and non-electronic forms - can facilitate a transition to more open, equitable and sustainable communities and society.

Implementation: The Commission on Sustainable Development - CSD - should convene an Ad Hoc, Open-Ended Working Group on Information Ecology - with participation of non-governmental organizations as well as of member states and from within United Nations agencies, programmes and centres. The mandate of the Working Group should include the following:

- to conduct a systematic review of the opportunities and implications for sustainability and equity of an ecologically sound approach to information flow;

- to identify and address critical sustainability issues from a whole systems, full life-cycle costs, perspective regarding the transition from a predominantly material to an increasingly digital economy - including resource and capital cost implications.

- to examine the development of effective mechanisms to support access to and transfer of ecologically and socially sound technologies;

- to identify and address actual and prospective, direct and indirect economic, cultural, social and environmental impacts of the introduction of information technology;

- to consider how information and communication technology can be used to strengthen effective community-based, participatory planning, decision-making and implementation processes relating to sustainability and equitable development, focusing on the use of information exchange mechanisms that are accessible at a grassroots level;

- to examine the destabilizing potentials of modern information, communication and automation technologies, and to develop provisions to prevent the undermining of traditional and sustainable cultures and practices, or the jeopardizing of human, economic, social cultural and political rights;

- to undertake an examination of the evolving information ecosystem in terms of equitable access to information in the North and the South, addressing intellectual property rights, trends towards concentration of ownership and control in information and communication technology and electronic media, access to information and communication infrastructure, and democratic, participatory processes, rights and freedoms;

- to review, in the light of the rapidly increasing proportion of capital formation that is in the realm of intellectual property, the need for development strategies that enable access to information and communication infrastructure as a critical means of enabling access to resources;

- to set in process the design of a comprehensive sustainability information and communication environment. This should be designed to facilitate partnership-based integrative coordination of monitoring and implementation of the agreements of the "Rio cluster" series of global conferences;

Rationale: The evolution of information and communication technology - the progressive emergence of an "information age" - has been dramatic in the five years since the first Earth Summit. The integrative power of information technology is increasingly clear, as is its progressively growing capacity to model and map the properties of whole systems, however, the pursuit of a specific trend in technology can become unsustainable. Meanwhile, the increasing scale and role of information and communication technology in the global economy and the increasing impact of automation, the rapid growth in both access and inequities in access confirm that the implications of information technology extend far beyond the role envisioned in Chapter 40 of Agenda 21 as a support system for decision-makers and require comprehensive re-assessment by the CSD.

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